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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,367	11/27/2001	Robert D.P. Hei	163.1585US01	9026
23552	7590	05/18/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			ANTHONY, JOSEPH DAVID	
		ART UNIT	PAPER NUMBER	
		1714		

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/995,367	HEI ET AL.
	Examiner	Art Unit
	Joseph D. Anthony	1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 May 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-57 is/are pending in the application. .
 - 4a) Of the above claim(s) 10-57 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

FINAL REJECTION

Election/Restrictions

1. Claims 10-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant election of Group I, claims 1-9 in the letter of 10/23/03 is acknowledged. This Restriction is made Final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5-9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 5 has New Matter in regards to the limitation of: "about 0.1 to 50 parts by weight of a peracid". Nowhere in applicant's originally filed specification is there support for such a peracid concentration range. The broadest peracid concentration range that applicant's originally filed specification is deemed to enable is 1-40 weight percent as set forth in the first Table listed on page 16 of the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1 and 5 are indefinite because the claims fail to define what the "EO", "PO", and "BO" groups are in the surfactant formula. The specification does not suffice to make the metes and bounds of these groups definite and clear. Applicant's specification on page 7, lines 5-6, states: "EO comprises ethylene oxide, PO comprises propylene oxide and BO comprises butylenes oxide moieties or residues". "Comprises"? What else besides ethylene oxide, propylene oxide and butylenes oxide do EO, PO and BO comprise?

Independent claim 1 is further indefinite in regards to the amendment filed 05/03/04 due to the word "aromatic" being inserted before the phrase "surfactant composition comprising; . . .". The reason such is indefinite is because the listed chemical formula positively requires that when subscripts $o + n = 1$, then R is a C_{1-18} alkyl group and R' is -H which results in no aromatic surfactant at all.

Claims 1-2 and 7 are further indefinite in regards to the use of the word "composition" after the word "peracid". The examiner is not sure why the word "composition" is being used. This causes confusion in regards to the actual concentration ranges being claimed for the peracid component. As an example, independent claim 1 states that the composition is one that comprises about 1 to

1000 ppm of a peracid composition. Said concentration limitation does not clearly define what the actual peracid concentration is in the claimed aqueous peracid treatment composition as a whole. After all, if the peracid acid composition is only 1% weight peracid and this composition is added to make an aqueous peracid treatment composition at an amount of 0.1 to 50 weight percent, than the actually peracid concentration would be within the range of 0.001 to 0.5 weight %. In addition, such low actual peracid concentrations are not deemed to be consistent with applicant's intended final aqueous peracid treatment compositions.

Claim 2 is indefinite because the phrase "and the soil is elemental sulfur" lacks antecedent basis from claim 1 which claim 2 directly depends.

Claim 4 is indefinite due to the phrase: "additionally comprises about 0.1 to 25 ppm of a sequestrant". Since claim 4 depends on claim 1 which already requires a sequestarant, is applicant claiming the present of another distinct sequestrant or is applicant further trying to limit the scope of the concentration range of the sequestrant component already set forth in claim 1?

Independent claim 5 is further indefinite in regards to how the phrase "for each one million parts of the aqueous treatment compositions as set forth in lines 10-11 of the claim relates to the applicant's new amendment of 05/03/04, wherein "about 0.1 to 10 weight percent of a sequesterant" was inserted into the body of the claim. The same issue applied to applicant's: "about 0.1 to 30 weight percent of surfactant" limitation as set forth in claim 5. The concentration ranges

of claim 5 are thus unclear and indefinite because applicant is mixing concentration units that are deemed to be in conflict with each other.

Claim 9 is indefinite due to the phrase: "additionally comprises about 0.1 to 5 weight percent of a sequestrant". Since claim 9 depends on claim 5 which already requires a sequestarant, is applicant claiming the present of another distinct sequestrant or is applicant further trying to limit the scope of the concentration range of the sequestrant component already set forth in claim 5?

5. At this point the metes and bounds of just what is being claimed is very indefinite to say the least. As such, the examiner will take the broadest reasonable interpretation of applicant's claims in light of applicant's specification for all following prior-art rejections. The following observations about the scope of applicant's claims will now be made. 1) Although independent claim 1 requires that the surfactant composition as a whole requires an aromatic surfactant component, such an aromatic surfactant component need not be a species that falls within the claimed formula. As shown by the examiner above such has to be the case when subscripts $o + n = 1$, then R is a C₁₋₁₈ alkyl group and R' is -H which results in no aromatic surfactant at all., 2) Independent claims 1 and 5 have no limitations that the surfactant component is a non-ionic surfactant component. This can be readily seen when the PO moiety is set to equal a phosphorous oxide group or the BO moiety is set to equal a boron oxide group. Applicant's refusal to amend independent claims 1 and 5 to positively define the scope of the moieties EO, PO and BO leads inevitably to this outcome. Applicant is reminded

that although claims are read in light of the specification limitations within the specification are not read into the claims. Applicant's said surfactant chemical formula thus reads on anionic surfactants as well as on non-ionic surfactants., and 3) Applicant's independent claim 5 has no requirement that any surfactant within the composition as a whole is an aromatic surfactant. As shown by the examiner above, such has to be the case when subscripts o + n = 1, then R is a C₁₋₁₈ alkyl group and R' is -H which results in no aromatic surfactant at all. Furthermore, since applicant fails to define what the actual peracid concentration is in the peracid composition component, see claim 1, the examiner will assume that the lower concentration amount is not limited.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-9 are rejected under 35 U.S.C. 103(a) as obvious over Hei et al. U.S. Patent Number 6,277,344 in view of anyone of the following patents: Amou et al. U.S. Patent Number 5,451,346 or Godin et al. U.S. Patent Number 6,168,808 or Godin et al. U.S. Patent Number 6,444,230 or Lentsch et al. U.S. Patent Number 6,257,253 or

Baum et al. U.S. Patent Number 6,302,968 or Harvey et al. U.S. Patent Number 5,756,139.

Hei et al teaches aqueous peracid treatment compositions adapted for the removal of odor compounds from processing plant effluents. The taught compositions comprise peroxyacid, hydrogen peroxide, carboxylic acid, sequestrant, olefin/essential oil compounds, water, optional non-ionic surfactants, and other optional adjuvant. All disclosed concentration ranges for all said components are deemed to directly encompass/overlap applicant's claimed concentration ranges for the said components, see column 8, line 7 to column 10, line 56, the examples and the claims. Hei et al differs from applicant's claimed invention in that there does not seem to be a direct teaching (i.e. by way of an example) to an aqueous peracid composition that actually contains a non-ionic surfactant of any type.

Amou et al. teaches fragrant aqueous peracetic acid containing oxidizing compositions that comprise: water, peracetic acid, hydrogen peroxide, a fragrance, such as essentially oils, non-ionic surfactants, such as polyoxyethylene nonyl phenyl ethers (reads on applicant's alkylaryl R and/or R' groups), and other optional adjuvant, see abstract, column 4, line 49 to column 5, line 32, the examples and claims.

Both Godin et al patents teach synergistic aqueous compositions of comprising: a) from 0.0005% to 20% by weight peractic acid, b) acetic acid, c) hydrogen peroxide, d) an amine oxide, and e) up to 2.5% by weight of at least

one nonionic surfactant, see the abstracts. The nonionic surfactants can be chosen from a number of different types with a preferred class of nonionic surfactant being a compound with formula (II), see column 4, lines 11-40 of the '808 patent and column 4, line 47 to column 5 line 8 of the '230 patent. Some of the surfactants within formula (II) are deemed to directly read on applicant's preferred nonionic surfactants when a "benzyl" group is used as a capping group. Both patents disclose commercially available nonionic surfactant sold under the name Triton DF 12 and Triton CF 10 which are benzylic ether of alkoxylated alcohols, see column 5, lines 1-8 of '808 and column 4, lines 38-41 of '230. The further addition of a stabilizer is also disclosed, see column 6, lines 53-54 of '808 and column 6, lines 60-61 of '230.

Lentsch et al and Baum et al both teach aqueous sanitizing compositions comprising: 1) peroxyacetic acid, 2) acetic acid, 3) hydrogen peroxide, 4) nonionic surfactant(s) and 5) sequestering agent(s), see the abstracts and tables in column 11 of the '968 patent and the table in column 10 of the '253 patent. The disclosed nonionic surfactants can be selected from those that have a benzyl capping end group, see column 8, line 25 to column 9, line 18 (note lines 55-58) of the '253 patent, and column 9, line 19 to column 10, line 12 (note lines 49-52) of the '968 patent.

Harvey et al. teaches egg washing and disinfecting process. One taught process is to make an aqueous solution comprising peracetic acid and a nonionic surfactant that is then applied to the surface of the eggs, see abstract, and

example 4. Applicant's claims are deemed to be anticipated over example 4 even though it is unclear if the nonionic surfactant sold under the trademark "proxitane 0510" is one that reads on applicant's claimed nonionic surfactants.

It would have been obvious to one having ordinary skill in the art to use the individual disclosures of anyone of said secondary references to the use of polyoxyalkylene nonionic surfactants containing a benzyl-capping group(s) as strong motivation to actually add such aromatic non-ionic surfactants to the aqueous peracid compositions as disclosed by Hei et al.. Applicant's claimed concentration range for said aromatic non-ionic surfactant is also deemed to be obvious over the broad concentration ranges for said surfactants as disclosed by the secondary references as well as by the broad non-ionic surfactant concentration range disclosed by the primary reference to Hei et al..

8. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amou et al. U.S. Patent Number 5,451,346 in view of anyone of the following patents: Hei et al. U.S. Patent Number 6,277,344 or Godin et al. U.S. Patent Number 6,168,808 or Godin et al. U.S. Patent Number 6,444,230 or Lentsch et al. U.S. Patent Number 6,257,253 or Baum et al. U.S. Patent Number 6,302,968 or Harvey et al. U.S. Patent Number 5,756,139.

Amou et al. teaches fragrant aqueous peracetic acid containing oxidizing compositions that comprise: water, peracetic acid, hydrogen peroxide, a fragrance, such as essentially oils, non-ionic surfactants, such as

polyoxyethylene nonyl phenyl ethers (reads on applicant's alkylaryl R and/or R' groups), and other optional adjuvants, see abstract, column 4, line 49 to column 5, line 32, the examples and claims. Amou et al differs from applicant's claimed invention in that there is no direct disclosure to the further addition of a sequestarant agent to be added to the taught aqueous peracetic compositions.

All said secondary patents have been described above. It would have been obvious to one having ordinary skill in the art to use the individual disclosures of anyone of said secondary references to the use of sequestarants as strong motivation to actually add such sequestrants to the aqueous peracid compositions as disclosed by Amou et al.. Applicant's claimed concentration range for said aromatic non-ionic surfactant is also deemed to be obvious over the broad concentration ranges for said sequestrants as disclosed by the secondary references.

Response to Arguments

9. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection which were required in light of applicant's amendment of 05/03/04. The Examiner does reject in total applicant's assertion that the secondary references to Godin et al. U.S. Patent Number 6,168,808, Godin et al. U.S. Patent Number 6,444,230, Lentsch et al. U.S. Patent Number 6,257,253, Baum et al. U.S. Patent Number 6,302,968 and Harvey et al. U.S. Patent Number 5,756,139 do not disclosure applicant's aromatic non-ionic surfactant component. The Examiner above

has pointed out the columns and lines where applicant's said claimed surfactant component is disclosed by each secondary patent.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Prior-Art Cited But Not Applied

11. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

Examiner Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (703) 872-9306. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.

Joseph D. Anthony
Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

5/12/04